

First record of the wasp family Aulacidae (Hymenoptera) from Malta

Giuseppe Fabrizio TURRISI¹ & Roberto RATTU²

ABSTRACT. The occurrence of the parasitoid wasp *Pristaulacus galitae* (Gribodo, 1879) in Malta is reported for the first time based on a female from Buskett Garden reared from wood of *Pistacia lentiscus* L. together with five potential hosts: the xylophagous beetles *Trichoferus fasciculatus fasciculatus* (Faldermann, 1837), *Niphona picticornis* Mulsant, 1839, *Penichroa fasciata* (Stephens, 1831) (Cerambycidae), *Anthaxia* (*Haplanthaxia*) *scylla* Levey, 1985 (Buprestidae), and *Opilo domesticus* (Sturm, 1837) (Cleridae). This is the first species of the evaniomorphan family Aulacidae recorded in the Maltese Islands.

KEY WORDS. *Pristaulacus galitae*, parasitoid, potential hosts.

INTRODUCTION

The aulacid wasps Aulacidae Shuckard, 1842 are endoparasitoids of wood-boring larvae of Coleoptera (Cerambycidae and Buprestidae) and Hymenoptera (Xiphydriidae) (JENNINGS & AUSTIN, 2004). They include 263 extant species grouped within only two genera, *Aulacus* Jurine, 1807 with 83 species and *Pristaulacus* Kieffer, 1900 (including the former *Panaulix* Benoit, 1984), with 180 species (SMITH, 2001; JENNINGS & AUSTIN, 2004; TURRISI *et al.*, 2009; TURRISI, 2017).

The faunistic knowledge on Aulacidae is generally unsatisfactory due to difficulties in collecting with conventional methods, e.g., by net; this problem led to a general paucity of available material, even in the large museums (TURRISI, 2007). The Palaearctic Aulacidae have been treated by TURRISI (2007) and TURRISI (2011) provided an update and revised key to species, but this family is generally under-recorded in the Mediterranean.

RESULTS

Pristaulacus galitae (Gribodo, 1879) (Fig. 1)

Aulacus galitae Gribodo, 1879: 339, Holotype ♀ – Tunisia, Galita Island.

Material examined: 1 ♀, Maltese Islands, Malta, Buskett Garden (35°51'26.58"N; 14°23'59.10"E; altitude 220 m a.s.l.) (Fig. 2), from wood samples of *Pistacia lentiscus* L., collected March 2015, emerged 14.vii.2015, Rattu R. leg. (Collection Turrisi G.F.).

Distribution: Algeria, Austria, Bulgaria, Canary Islands (Tenerife), Croatia, Cyprus, Czech Republic, France, Germany, Greece (including Crete and Rhodos), Hungary, Iran, Italy (including Sardinia and Sicily), Morocco, Poland, Romania, Russia (westernmost part), Slovakia, Spain, Tunisia (including Galita Island), Turkey, Ukraine and former Yugoslavia (TURRISI, 2007, 2013).

¹ Via Cristoforo Colombo, 8, 95030, Pedara (Catania), Italy. E-mail: giuseppefabrizioturrisi@gmail.com

² Via del Pozzetto 1, 09126, Cagliari, Italy. E-mail: robertorattu@unica.it



Figure 1: *Pristaulacus galitae* (Gribodo, 1879).



Figure 2: Malta, Buskett (locality of *Pristaulacus galitae*, Gribodo, 1874)

Identification: Medium-sized species; the Maltese specimen has a body length of 12.5 mm and forewing length of 7.8 mm. It is distinguished by the combination of the following characters: shape of the head, with rounded profile of temple, occipital carina moderately wide ($0.5 \times$ diameter of an ocellus), one anterior tooth-like process on each side of the lateroventral margin of pronotum, comb-like tarsal claws with four tooth-like processes along inner margin, ovipositor length $1.0 - 1.2 \times$ forewing length.

Remarks: This is the first species of the evaniomorphan family Aulacidae to be found in the Maltese Islands. The species shows a relatively wide presence in the insular context of the Mediterranean basin (TURRISI, 1999, 2007, 2013). Very little is known of its biology. It is mainly recorded from Mediterranean scattered woods and shrubs. However, the species has been reared frequently from several woody host plants belonging to Fabaceae, Fagaceae, Cistaceae, Anacardiaceae and Moraceae, together with a number of potential hosts; twelve species of Cerambycidae, one species of Bostrychidae and one species of Cleridae (TURRISI, 2007). GHAHARI (2012) mentioned specimens reared in Iran together with *Trichoferus griseus* (Fabricius, 1792) (Cerambycidae) feeding on wood of common fig, *Ficus carica* L. (Moraceae). The specimen from Malta was reared from wood samples of *Pistacia lentiscus* L. (Anacardiaceae), at Buskett Garden, which represents one of the otherwise very rare semi-natural woodlands found in the Maltese Islands. The specimen was reared together with five putative hosts, *Trichoferus fasciculatus fasciculatus* (Faldermann, 1837), *Niphona picticornis* Mulsant, 1839, *Penichroa fasciata* (Stephens, 1831) (Cerambycidae) and *Anthaxia (Haplanthaxia) scylla* Levey, 1985 (Buprestidae), and *Opilo domesticus* (Sturm, 1837) (Cleridae). As highlighted by TURRISI (1999, 2007, 2011) and SMITH (2001), it is not possible in most cases, as the present, to ascertain the effective host species of aulacids. Two of these potential hosts, *Trichoferus fasciculatus fasciculatus* and *Niphona picticornis*, have already been reared together with *Pristaulacus galitae* in Sicily (TURRISI, 1999, 2007).

REFERENCES

- GHAHARI, H. (2012) Two new records of Aulacidae (Hymenoptera: Evanioidea) from Iran. *Entomofauna*, 33: 273–278.
- GRIBODO, G. (1879) Note imenotterologiche. *Annali del Museo di Storia Naturale di Genova*, 14: 325–347.
- JENNINGS, J.T. & AUSTIN, A.D. (2004) Biology and host relationships of aulacid and gasteruptionid wasps (Hymenoptera: Evanioidea): a review (Pp. 187–215). In: RAJMOHANA, K., SUDHEER, K., GIRISH KUMAR, P., SANTHOSH, S. [eds.], *Perspectives on Biosystematics and Biodiversity*. University of Calicut, Kerala, India.
- SMITH, D.R. (2001) World catalog of the family Aulacidae (Hymenoptera). *Contributions on Entomology, International*, 4(3): 261–319.
- TURRISI, G.F. (1999) Xyelidae, Aulacidae, Heloridae e Masaridae, quattro famiglie nuove per la fauna siciliana (Insecta Hymenoptera). *Bollettino della Società entomologica italiana*, 131 (1): 41–46.
- TURRISI, G.F. (2007) Revision of the Palaearctic species of *Pristaulacus* Kieffer, 1900 (Hymenoptera: Aulacidae). *Zootaxa*, 1433: 1–76.
- TURRISI, G.F. (2011) Systematic revision of the sibling species belonging to the *Pristaulacus compressus* group (Hymenoptera: Aulacidae). *Insect Systematics & Evolution*, 42: 1–27.
- TURRISI, G.F. (2013) Review of Aulacidae (Hymenoptera: Evanioidea) from Greece and Cyprus with new records. *Entomologia Hellenica*, 22: 1–9.
- TURRISI, G.F. (2017) The parasitoid wasp family Aulacidae with a revised World checklist (Hymenoptera, Evanioidea). *Proceedings of the Entomological Society of Washington*, 119 (Mémor): 931–939.
- TURRISI, G.F., JENNINGS, J.T. & VILHELMSSEN, L. (2009) Phylogeny and generic concepts of the parasitoid wasp family Aulacidae (Hymenoptera: Evanioidea). *Invertebrate Systematics*, 23: 27–59.